CLAIMS

1. A fuel cell hybrid vehicle utilizing flooded aqueous battery or batteries operatively coupled to a fuel cell stack, an electric drive motor, and an integrated watering system, said integrated watering system comprising:

a heat exchanger configured to extract water from exhaust air from said fuel cell stack;

a reservoir operatively connected to store said water;

a sensor operatively connected to generate a signal based on said flooded aqueous batteries' electrolyte level;

a pump operatively connected to said reservoir and said flooded aqueous battery or batteries; and

a system controller operatively connected to receive and evaluate said signal from said sensor and actuate said pump to move water from said reservoir to said flooded aqueous battery or batteries.

2. The fuel cell hybrid vehicle and integrated watering system of claim 1, said integrated watering system further comprising:

a deionizer, operatively connected between said reservoir and said flooded aqueous batteries.

3. The fuel cell hybrid vehicle and integrated watering system of claim 1, said integrated watering system further comprising:

moisture sensors, operatively connected to generate signals based on moisture levels for hydrogen gas and air input lines into said fuel cell;

humidifiers, operatively connected to said reservoir and said hydrogen gas and air input lines; and

a second controller, operatively connected to receive and evaluate said signals from said moisture sensors and actuate said humidifiers.

4. The fuel cell hybrid vehicle and integrated watering system of claim 3, where said system controller and said second controller are integrated.

5. The fuel cell hybrid vehicle and integrated watering system of claim 1, where said flooded aqueous battery or batteries are of a type chosen from the group consisting of: nickel metal hydride, nickel iron, nickel cadmium, and lead acid.

6. The fuel cell hybrid vehicle and integrated watering system of claim 1, said integrated watering system further comprising:

an overflow reservoir operatively connected to said aqueous battery or batteries.

7. A fuel cell hybrid vehicle utilizing flooded aqueous battery or batteries operatively coupled to a fuel cell stack, an electric drive motor, and an integrated watering system, said integrated watering system comprising:

a heat exchanger configured to extract water from exhaust air from said fuel cell stack;

a reservoir operatively connected to store said water;

a pump operatively connected to said reservoir and said flooded aqueous battery or batteries;

a system controller operatively connected to periodically pump water from said reservoir to said flooded aqueous battery or batteries;

an overflow reservoir operatively connected to receive overflow from said flooded aqueous battery or batteries;

a sensor on said overflow reservoir operatively connected to detect a change in fluid level in said overflow reservoir.

8. The fuel cell hybrid vehicle and integrated watering system of claim 7, said integrated watering system further comprising:

a deionizer, operatively connected between said reservoir and said flooded aqueous battery or batteries.

9. The fuel cell hybrid vehicle and integrated watering system of claim 7, said integrated watering system further comprising:

moisture sensors, operatively connected to generate signals based on moisture levels for hydrogen gas and air input lines into said fuel cell;

humidifiers, operatively connected to said reservoir and said hydrogen gas and air input lines; and

a second controller, operatively connected to receive and evaluate said signals from said moisture sensors and actuate said humidifiers.

10. The fuel cell hybrid vehicle and integrated watering system of claim 8, where said system controller and said second controller are integrated.

11. The fuel cell hybrid vehicle and integrated watering system of claim 7, where said flooded aqueous battery or batteries are of a type chosen from the group consisting of: nickel metal hydride, nickel iron, nickel cadmium, and lead acid.